will keep it at hand as an indispensable tool for his work. The first edition has proved to be of inestimable value in this way, and this new volume will be even more so, owing to the greater bulk of literature it summarizes.

A word ought to be said about the subject-matter, which is not exclusively confined to plant genetics. Phenomena of general importance which are badly represented among plants are illustrated from animal examples. A fair amount of the fundamental work on Drosophila is therefore reviewed. On the other hand some rather special genetical topics have been deliberately almost omitted, as for example the mathematical treatment of natural selection.

All geneticists will be grateful to the author for the very great amount of work he has saved them.

A. C. FABERGÉ.

Muller, H. J. *Bibliography on the Genetics of Drosophila.* Published by the Imperial Bureau of Animal Breeding and Genetics. Edinburgh, 1939. Oliver & Boyd. Pp. 132. Price 5s.

THE bibliography in Morgan-Bridges-Sturtevant's *Genetics of Drosophila* which includes papers up to 1924 consists of 381 titles. The new bibliography by Dr. H. J. Muller, which includes papers up to the end of 1938, contains no less than 2,965. Were it not for the solidity and durability of this huge piece of research, one would be tempted to speak of its mushroom-like growth. The fact that a man of Dr. Muller's eminence has devoted so much time and work to its compilation is sufficient proof of its importance for the progress of genetics.

The list is " as nearly complete as possible " on the genetic side. No attempt has been made to attain a similar completeness in the fields of systematics, morphology, natural history, etc.; the author's belief, though, that it is " fairly adequate " must be regarded as an understatement. The titles are arranged alphabetically according to authors, with cross-references to all the authors of joint papers. The list is not subdivided according to subjects, as many papers touch on so many problems that the unavoidable overlapping of the individual lists would have resulted in a considerable swelling of the volume. A classification according to subjects would have increased the value of the bibliography a great deal. Perhaps it may be suggested that in a later edition, a marginal cypher opposite each title might give an indication of its main contents. This would result in a classification without the necessity of giving any title more than once. However, it would be unjust to let even a note of constructive criticism dim the achievement, and we must be thankful to the author and to the Imperial Bureau alike for this invaluable key to the literature.

H. GRÜNEBERG.

Harland, Sidney Cross. *The Genetics of Cotton.* London, 1939. Jonathan Cape. Pp. 193. Price 10s. 6d. net.

THE publication of a monograph on the genetics of an organism is of interest to a wider circle than those who actually work with it. Almost every animal or plant species which has so far been thoroughly investigated has yielded certain peculiar types of information for obtaining which that species was particularly suitable. The group of Old and New World Cottons with which Dr. Harland's book deals is of particular interest from the evolutionary point of view. The group comprises species with a diploid complement of twenty-six and fifty-two chromosomes. Many species crosses are possible, and in a number of cases mutant genes have been transferred, by means of repeated back-crosses, from one species into another. Such experiments have in several instances shown very clearly that the expression and dominance relationships of genes depend very largely on the genetic background in which those genes produce their effects. The author's main conclusion is that " each species has a large number of genes, most of which have only a minute physiological or morphological effect; that these genes constitute a harmoniously working system as a result of natural selection and